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(54) Title: **MEMBRANE ELECTRODE ASSEMBLY (MEA), METHODE FOR ITS MANUFACTURING AND A METHOD FOR PREPARING A MEMBRANE TO BE ASSEMBLED IN A MEA**

(57) Abstract: A method for preparing a membrane to be assembled in a membrane, electrode assembly is disclosed comprising the step of swelling an ion-conducting membrane in a liquid containing at least one solvent or to an atmosphere containing the vapor phase of at least one solvent by controlling the content of the solvent in the ion conducting membrane. Further, a method for manufacturing a membrane electrode assembly using a ion conducting membrane is disclosed, comprising the steps of: providing a ion conducting membrane in a pre-swollen state; coating of the ion conducting membrane on both sides with an electrode layer to form a sandwich; and hot-pressing the sandwich to form an ion conducting bonding of the afore-mentioned layers of the sandwich. Furthermore, a membrane electrode assembly is disclosed comprising a hot pressed sandwich comprising an electrode layer, a ion conducting membrane and again an electrode layer, thereby using the ion conducting membrane in its pre-swollen status prior to the hot-pressing.



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